LISTING OF AND AMENDMENTS TO CLAIMS:

1.   (currently amended) Apparatus (101) for determining a
pulse position for a signal encoded by pulse modulation,
the signal comprising a first component (PGS) and a second
component (DGS), the apparatus comprising:

a determination unit (118) comprising a probability table
(110) for providing a value (DDS) representative of the
pulse position in response to receipt of at least one
symbol of the first component (PGS) and at least one symbol
of the second component (DGS), wherein the first component
is a first received signal having a first signal quality
measure and the second component is a second received
signal having a second signal quality measure, said
probability table being an asymmetric probability table
when said first signal component has a better quality
measure than said second signal component, and said
probability table being a symmetric probability table when
said first signal component has an equal quality measure to
said second signal component.

2.   (currently amended) Apparatus according to claim 1
further comprising a first storage unit (102) for storing
at least one symbol of the first component (PGS) and a
second storage unit (104) for storing at least one symbol
of the second component (DGS).

3.   (currently amended) Apparatus according to claim 1,
wherein the pulse position (DDS) is the most-likely pulse
position.

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4.   (canceled)

5.   (previously presented) Apparatus according to claim 1,
wherein the probability table comprises a diagonally
asymmetric table.

6.   (currently amended) Apparatus according to claim 5,
wherein in the case that the first component (PGS) shows a
legal symbol then the second component (DGS) has no
influence on the value.

7.   (currently amended) Apparatus according to claim 1,
wherein the quality of the first component (PGS) is better
than that of the second component (DGS).

8.   (previously presented) Apparatus according to claim 1,
wherein the probability table comprises a diagonally
symmetric table.

9.   (currently amended) Apparatus according to claim 1,
wherein the probability table (110) comprises more than two
dimensions.

10.   (currently amended) Apparatus according to claim 1,
wherein the probability table (110) is storable in a memory
(110), such as a read only memory (ROM) and/or a random
access memory (RAM), and wherein two or more probability
tables (110) are usable.

11.   (currently amended) Apparatus according to claim 1,
wherein the determination unit (118) derives the pulse

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position (DDS) by a prestored formula, preferably a probability based formula, whereby the at least one symbol of the first component (PGS) and the at least one symbol of the second component (DGS) represent signal values for input to the formula.

12. (canceled)

13. (currently amended) Apparatus according to claim 25, wherein the means (122) for detecting an illegal symbol are logic circuits (122) or an extension of the probability table (110).

14. (original) Apparatus according to claim 1, wherein the signal comprises an infrared signal.

15. (canceled)

16. (currently amended) A method for determining a pulse position for a signal encoded by a pulse modulation, the signal comprising a first component (PGS) and a second component (DGS), the method comprising the step of:

providing, via a probability table (110), a value (DDS) representative of the pulse position in response to receipt of at least one symbol of the first component (PGS) and at least one symbol of the second component (DGS), wherein the first component is a first received signal having a first signal quality measure and the second component is a second received signal having a second signal quality measure, said probability table being an

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asymmetric probability table when said first signal component has a better quality measure than said second signal component, and said probability table being a symmetric probability table when said first signal component has an equal quality measure to said second signal component.

17.   (currently amended) A method according to claim 16, further comprising the steps of storing at least one symbol of the first component ~~(PCS)~~ and storing at least one symbol of the second component ~~(DCS)~~.

Claims 18, 19, 20 and 21 (all canceled).

22.   (currently amended) A computer program comprising program code means for performing, when said program is run on a computer, a method for determining a pulse position for a signal encoded by a pulse modulation, the signal comprising a first component ~~(PCS)~~ and a second component ~~(DCS)~~, the method comprising:

providing, via a probability table ~~(110)~~, a value ~~(BDS)~~ representative of the pulse position in response to receipt of at least one symbol of the first component ~~(PCS)~~ and at least one symbol of the second component ~~(DCS)~~, wherein the first component is a first received signal having a first signal quality measure and the second component is a second received signal having a second signal quality measure, said probability table being an asymmetric probability table when said first signal component has a better quality measure than said second

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signal component, and said probability table being a symmetric probability table when said first signal component has an equal quality measure to said second signal component.

23. (currently amended) A computer program product comprising program code means stored on a computer readable medium for performing, when said program is run on a computer, a method for determining a pulse position for a signal encoded by pulse modulation, the signal comprising a first component (PGS) and a second component (DGS), the method comprising:

providing, via a probability table (110), a value (DDS) representative of the pulse position in response to receipt of at least one symbol of the first component (PGS) and at least one symbol of the second component (DGS), wherein the first component is a first received signal having a first signal quality measure and the second component is a second received signal having a second signal quality measure, said probability table being an asymmetric probability table when said first signal component has a better quality measure than said second signal component, and said probability table being a symmetric probability table when said first signal component has an equal quality measure to said second signal component.

24. (currently amended) Apparatus (101) for determining a pulse position for a signal encoded by pulse modulation,

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the signal comprising a first component (PGS) and a second
component (DGS), the apparatus comprising:

a determination unit (110) comprising a probability table
(110) for providing a value (DDS) representative of the
pulse position in response to receipt of at least one
symbol of the first component (PGS) and at least one symbol
of the second component (DGS), wherein the probability
table (110) is based on Bayes' probability.

25. (currently amended) Apparatus (101) for determining a
pulse position for a signal encoded by pulse modulation,
the signal comprising a first component (PGS) and a second
component (DGS), the apparatus comprising:

a determination unit (110) comprising a probability table
(110) for providing a value (DDS) representative of the
pulse position in response to receipt of at least one
symbol of the first component (PGS) and at least one symbol
of the second component (DGS), and

means for detecting an illegal symbol.

26. (currently amended) Apparatus (101) for determining a
pulse position for a signal encoded by pulse modulation,
the signal comprising a first component (PGS) and a second
component (DGS), the apparatus comprising:

a determination unit (110) comprising a probability table
(110) for providing a value (DDS) representative of the
pulse position in response to receipt of at least one

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symbol of the first component (PCS) and at least one symbol of the second component (PCS), wherein the pulse modulation comprises a four position pulse position modulation.

27. (new) Apparatus according to claim 1, wherein said pulse position is pulse position as a function of time.

28. (new) A method according to claim 16, wherein said pulse position is pulse position as a function of time.

29. (new) The computer program according to claim 22, wherein said pulse position is pulse position as a function of time.

30. (new) The computer program product according to claim 23, wherein said pulse position is pulse position as a function of time.

31. (new) Apparatus according to claim 25, wherein said pulse position is pulse position as a function of time.

32. (new) Apparatus according to claim 26, wherein said pulse position is pulse position as a function of time.

33. (new) Apparatus according to claim 1, wherein, said probability table is a first probability table when said first signal component has a better quality measure than said second signal component, and said probability table is a second probability table when said first signal component has an equal quality measure to said second signal component.

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